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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,173	08/30/2001	Tsutomu Yamazaki	011350-284	6797

7590

07/21/2006

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EXAMINER

LAROSE, COLIN M

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 07/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/942,173	Applicant(s) YAMAZAKI, TSUTOMU	
	Examiner Colin M. LaRose	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-19,22-32,35 and 36 is/are rejected.
- 7) ☒ Claim(s) 7,8,20,21,33 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 May 2006 has been entered.

Response to Arguments and Amendments

2. Applicant has amended independent claims 1, 14, 24, and 27 to denote that the uniform adjusting color is specified based on the colors of the first image data (e.g. foreground text) and all the colors of the second image data (e.g. background objects) "irrespective of the number of colors of the second image data." Applicant asserts that the claims distinguish from Bates because in Bates, "if the background object contains more than 'n' number of top colors, not all colors of background objects are used" (see Remarks, pp. 14-15).

3. Applicant's arguments pertaining to the above amendments have been considered but are not persuasive. These claim amendments do not render the claims patentably distinct from Bates for at least the following three reasons:

(1) First, it should be pointed out that the claims require that the specifying of a uniform adjusting color be merely *based on* all the colors of the second image data. In contrast, Applicant argues that, in Bates, not all of the background colors are *used*. The terms "based on" and "used"

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have different scopes. "Use" requires active employment of the thing(s) in question, whereas "based on" requires something less, such as merely consideration of the thing(s) in question.

The question then is whether Bates' system specifies a uniform adjusting color "based on," or equivalently, "in consideration of," all of the colors contained in the background objects. It appears that Bates does in fact consider all of the colors in the background when specifying a uniform adjusting color.

In column 21/36-43, Bates recognizes that there are N number of possible background colors that can cause contrast problems with the colors of the foreground text (thereby rendering the foreground text illegible or the like). Therefore, Bates teaches that, "all of these N colors [are used] in comparisons with the text on this background." As a necessary course of action, Bates must consider all of the colors in the background to determine which of those colors correspond to one of the "N" colors that potentially cause contrast problems with the foreground text (see e.g. 325, figure 3). Then, those colors that are among the "N" colors are "used" in comparisons with the foreground color to determine which colors cause actual contrast problems. See steps 320-325, figure 3, and figure 5, where all of the colors in the background are considered to determine which ones correspond to the set of "N" colors.

In sum, Bates may only *use* background colors that correspond to the "N" colors identified as potentially problematic, however, all of the color in the background must at least be *considered* so as to determine which of those colors are among the "N" colors. As such, Bates fairly teaches that the specifying of the uniform adjusting color is *based on* all the colors in the background "irrespective of the number of colors of the second image data."

The above analysis does not consider whether all of the background colors are "used," as argued by the Applicant. It only considers whether the specifying is "based on" all of the background colors, as recited in the claims.

(2) A second interpretation of Bates is that Bates does teach that the specifying is performed both "using" and "based on" all of the background colors "irrespective of the number of colors of the second image data." As explained above, Bates recognizes that there are N number of possible background colors that can cause contrast problems with the colors of the foreground text, and that, "all of these N colors [are used] in comparisons with the text on this background."

Therefore, in an image that contains X number of background colors, wherein all of the X colors correspond to one of the N potentially problematic colors, Bates teaches that all of the X colors are used in comparison with the foreground color to determine the uniform adjusting color. All X colors are used "irrespective of the number of colors" in the background -- i.e. irrespective of the value of X.

(3) Third, Bates expressly teaches that all of the colors in the background are used. See column 21/60-67: "having multiple colors in the background means that steps 310 through 350 will be performed for each color of the background and one text object." Thus, Bates teaches that the specifying of a uniform adjusting color is based on all of the background colors, regardless of the number of background colors.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 9, 11, 14-16, 22-29, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,809,741 by Bates et al. ("Bates").

Regarding claims 1, 14, 24, and 27, Bates discloses an image processing device/method/program comprising:

a first color detection means for detecting colors of a first image data by each processing unit (computer 100 detects the colors of the pixels ("processing units") for a text object – see step 320, figure 3);

a second color detection means for detecting colors of a second image data that serves as the first image data's background by each processing unit, the second image data having a plurality of different colors (computer 100 detects the colors of the pixels for the background – see step 307, figure 3; see also figure 5); and

a color adjusting means for specifying a uniform adjusting color, based on the colors of the first image data and all the colors of the second image data, that makes the first image data recognizable against all colors of the second image data irrespective of the number of colors of the second image data, that serves as the first image data's background, concerning the first image data that have approximately equal colors (i.e. when the text and background colors

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exhibit a contrast problem (step 330), a new color for the text and/or background (“uniform adjusting color(s)”) are generated at step 335 – see also figure 7; see also column 21, lines 36-62 where “all” the colors of the second image data are utilized regardless of the number thereof).

Regarding claims 2, 15, 25, and 28, Bates discloses an image processing device/method/program as claimed in claims 1, 14, and 24, further comprising: an image synthesizing means for synthesizing the first image data converted into said adjusting color with said second image data (i.e. computer 100 synthesizes the text image data that has been converted to a new color with the background image data).

Regarding claims 3, 16, 26, and 29, Bates discloses an image processing device/method/program as claimed in claims 1, 14, and 24, wherein said processing unit is a pixel (i.e. the image data may be in a GIF or JPEG format and therefore, consists of pixels – see e.g. column 12, lines 2-6).

Regarding claims 9, 22, and 35, Bates discloses an image processing device/program as claimed in claims 1 and 14, wherein said first image data is an image data that represents character images (i.e. first image data is text).

Regarding claims 11 and 23, Bates discloses preparing an electronic file based on the image data synthesized by the image synthesizing means (e.g. a new HTML file is created with the new color combinations – see column 16, lines 18-22).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 6, 10, 17, 19, 30, 32, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. ("Bates") in view of Translation of Japanese Patent 09-025285A by Honda ("Honda").

Regarding claims 4, 17, and 30, Bates discloses an image processing device/program as claimed in claims 1 and 14, further comprising:

a first memory means (120) for storing the colors of the first image data by each of the approximately equal colors (i.e. the values of the detected colors are necessarily stored somewhere in memory); and

a second memory means (120) for storing the colors of the second image data that serves as the first image data's background, said colors of which are correlated to each of the corresponding colors of the first image data that are stored in said first memory means (i.e. the values of the detected colors are necessarily stored somewhere in memory, and those colors of the background object are correlated, or correspond, to the text colors that are overlaid thereon);

Bates teaches that one way of determining the background or foreground colors is through an histogram accumulation method, such as shown in figure 5. However, Bates is silent to calculating average values of the background image data (i.e. the second image data), and

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using the average background color and the text color to determine the uniform adjusting color, as claimed.

Honda discloses an image processing system that makes text more legible by altering the colors of the text so that it exhibits higher contrast as compared with the background on which the text is overlaid. In particular, Honda discloses basing the determination of the new text color on the average of the background colors (page 5 of Honda: “overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]”). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bates by Honda to calculate the average value of the background colors per Honda’s teachings and determine the uniform adjusting color based on the colors of the first image data (i.e. the text object) and the average of the second image data (i.e. background colors), since Bates teaches that the manner of detecting the colors of objects is well-known in the art (column 12, lines 10-13), and Honda discloses that one technique for determining a background color is to compute the average of color values in the background. Bates’ uniform adjusting color would then be based on the detected text object colors and the average color values of the background.

Regarding claims 10 and 36, Bates discloses an image processing device as claimed in claim 1, further comprising: a third memory means for storing said second image data (i.e. memory 120).

Regarding claims 6, 19, and 32, Honda discloses an image processing device/program as claimed in claims 4 and 17, wherein said average color value calculating means calculates the average value of the coordinate values of the colors of the second image data in a specified

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color system (page 5 of Honda: “overlay pixel value determination circuit ... computes the average pixel value (density value) of a certain region [of the background image]” – this computation is done in the RGB color system).

8. Claims 5, 18, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. (“Bates”) in view of Translation of Japanese Patent 09-025285A by Honda (“Honda”), and further in view of U.S. Patent 5,930,385 by Fujimoto et al. (“Fujimoto”).

Regarding claims 5, 18, and 31, Bates and Honda is silent to a judging means for judging that colors of the first image data are approximately equal when a sum of squares of the differences of their coordinate values in a specified color system is less than a specified value. Bates, for instance, equates two colors when the colors are within a certain range (see delta values, figure 7)

Fujimoto discloses an image processing system adapted to perform a color conversion on an input image, such as converting a color image to a monochrome image. Figure 2 shows a method for such conversion. Figure 3 shows the process of region dividing, which is included in the method of figure 2. In dividing the image into color regions, it is determined whether adjacent pixels have the same color at step 2-3. As figure 8 shows, determining whether two colors are the same involves determining whether the sum of squares of a difference in color values is less than a threshold.

It would have been obvious to modify Bates and Honda by Fujimoto to include means to judge the similarity of input character colors, as claimed, since Fujimoto discloses that

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generating monochrome text involves judging the similarity of colors based on the sum of squares of the differences of coordinate values in relation to a threshold.

9. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,809,741 by Bates et al. ("Bates") in view of U.S. Patent 5,872,573 by Adegeest.

Regarding claim 12, Bates does not expressly disclose obtaining the first and second image data via a scanner, as claimed.

Adegeest discloses a system for producing legible text to be overlaid on a background, similar to that of Bates. In particular, Adegeest discloses that it is conventional to obtain input images via a scanner for the purposes of adjusting text and background so that the text is more legible against the background. It would have been obvious to modify Honda by Adegeest to input the second image via a scanner, as claimed, since Adegeest shows that it was conventional to input images by electronically scanning documents with a scanner.

Regarding claim 13, Bates is silent to a printer unit for printing images on recording media based on the synthesized image data.

Adegeest discloses a system for producing legible text to be overlaid on a background, similar to that of Bates. In particular, Adegeest discloses that it is conventional to output processed images via a printer 23, figure 1. It would have been obvious to modify Honda by Adegeest to output the synthesized image via a scanner, as claimed, since Adegeest shows that it was conventional to output images using a printer.

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Allowable Subject Matter

10. Claims 7, 8, 20, 21, 33, and 34 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu, can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

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Colin M. LaRose
Group Art Unit 2624
14 July 2006



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PRIMARY EXAMINER